

ARNOLD ARBORETUM  
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THE HEDGE DEMONSTRATION PLOT AT THE  
ARNOLD ARBORETUM

**I**N THE fall of 1936 an extensive plot of experimental hedges was planted at the Arboretum. Because of the necessary formality of the planting, it was not laid out near any of the lovely informal plantings so enjoyed by the public. Instead it was set off from the rest of the Arboretum on ground formerly belonging to the Bussey Institution. At present there are 112 different kinds of hedges, and two more will be added next spring.

In a new book just published\* (**Hedges, Screens, and Windbreaks, their uses, selection, and care**), 250 plants are listed as suitable for different types of hedges. Not all are perfectly adaptable to this use, but a large number of them are. It is of considerable value to study such a large number of hedges when they are growing within close proximity under the same general conditions. The foliage of certain ones is rather coarse in texture; while the foliage of others is comparatively fine. Some grow vigorously and should be used only for tall hedges and screens, while others can be easily restrained to form excellent low and even dwarf hedges.

The oldest hedge experiments in the western hemisphere are those at the Dominion Experimental Farm, Ottawa, Canada, where some of the plantings are over fifty years old. In the United States, the Morton Arboretum and Cornell University have the only other extensive experimental plots. Fortunately, some of the state experiment stations have realized the value of hedge demonstrations and some have already planted a number of excellent hedges.

\*Wyman, Donald, *Hedges, screens and windbreaks; their uses, selection and care*. New York; Lond. 1938. 8°. pp. xviii, 249. Map plates. (McGraw-Hill Book Co.)

Each hedge at the Arnold Arboretum is 25 feet long. They are arranged in a semi-circular plot of ground in front of the old Bussey Building with sufficient distance between each hedge to allow ample room for growth. The taller growing hedges have been given more space than the lower growing ones. Many other shrubs might also have been included in this planting, but because of insufficient land available for this purpose they have been omitted. In a few places two hedges have been planted in the same twenty-five-foot row. For instance, the red-leaved Japanese barberry is similar to the typical form of that species in every respect but the color of the foliage. Consequently  $12\frac{1}{2}$  feet of one hedge is made up of Japanese barberry, and the other  $12\frac{1}{2}$  feet made up of its red-leaved variety.

In the fall of 1936, when these hedges were planted, most of the deciduous plants were approximately 3 feet high. The evergreens were even smaller. Plants of this size are much easier to transplant than larger ones, and what is even more important, young plants are easily trained into a dense, bushy habit. In the taller growing hedges only seven plants of each variety were used; in the lower growing ones ten plants were used.

All the deciduous plants were cut down to about six inches from the ground as soon as they were transplanted. This is necessary in any young hedge to force the plants to develop a bushy habit and to branch from the base. No pruning was given these hedges during the first year of growth. In the second year all the hedges were carefully inspected and the over-vigorous shoots were cut back, while a small amount of pinching was done on the sides to give the plants a uniform appearance. During the growing season of 1939, many of these hedges will require regular pruning, but for the first few years the object is to keep all hedges as small as possible in order to promote dense, bushy growth from the base.

The evergreen shrubs have not been cut to the ground after planting, but have been inspected several times and occasionally clipped in order to promote a dense growth. Evergreen hedges, being slower growing than deciduous hedges, are considerably more easily cared for, but with both it is equally important to take every opportunity in promoting a dense habit of growth from the beginning.

All the plants (except a few rare ones grown on our grounds) have been given to the Arnold Arboretum for the purpose of growing in a hedge demonstration plot. The following nurseries have very generously contributed this material.

Wyman's Framingham Nurseries, Framingham, Mass.  
Bay State Nurseries, North Abington, Mass.  
Kelsey-Highlands Nursery, E. Boxford, Mass.  
Princeton Nurseries, Princeton, N.J.

Henry Kohankie & Son, Painesville, Ohio  
Cole Nursery Company, Painesville, Ohio  
Cherry Hill Nurseries, West Newbury, Mass.  
Littlefield-Wyman Nurseries, North Abington, Mass.

The Arboretum takes this opportunity of publicly expressing its appreciation of these gifts. It would have required many years and considerable trouble to propagate and grow these many plants. The generous gift of this material has rendered this experimental plot useful to the public, to nurserymen, and landscape architects in a comparatively short time.

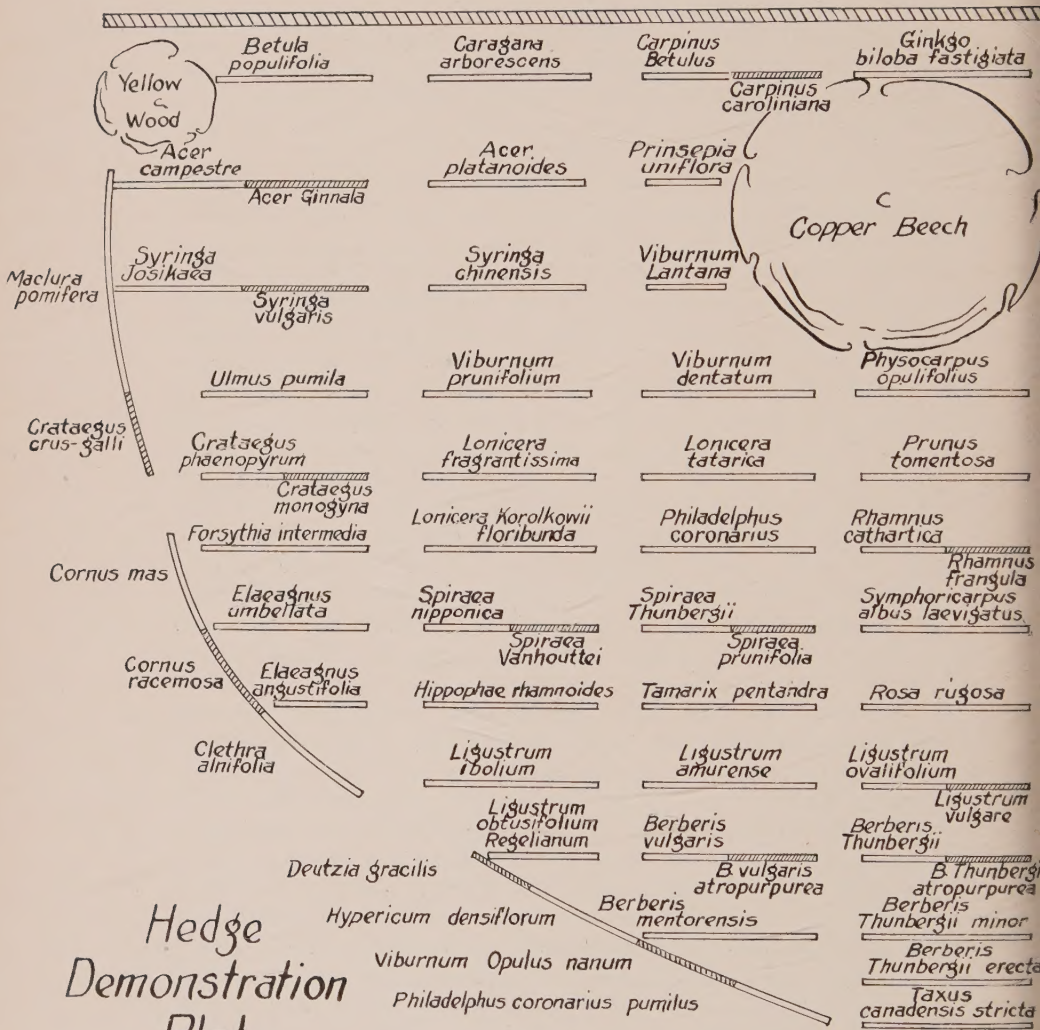
#### Notes

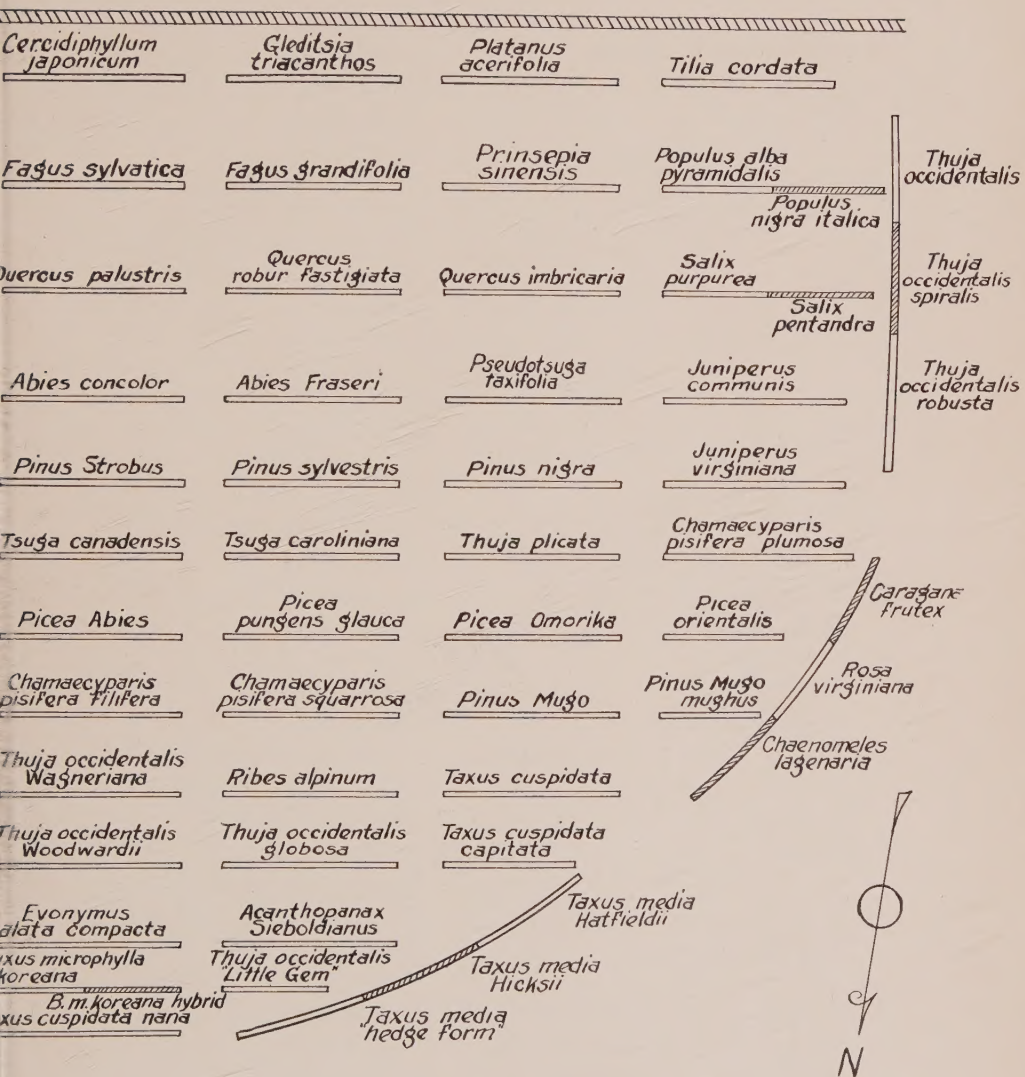
The Arboretum has done a great deal of hybridizing during the past spring and summer. Approximately 20,000 hand pollinations have been made. These have been distributed among 23 genera including *Magnolia*, *Malus*, *Prunus*, *Rhododendron*, *Viburnum*, *Salix*, *Fraxinus*, *Betula*, *Pinus*, *Picea*, *Abies*, and several others. Although it is one thing to pollinate flowers and another to collect the ripened fruit, nevertheless, in spite of hungry birds and the hurricane, quite a few were collected. In addition, a large number of open pollinated seeds were collected from trees and shrubs of particular ornamental value. This work is under the general supervision of Dr. Karl Sax of the Arnold Arboretum. A good proportion of the seed collected this fall will be germinated and later grown in the nurseries where it will be carefully watched and variations in the plants observed and noted. An increased amount of available nursery space will insure its being carried on for a number of years. With approximately 7000 species and varieties of ornamental woody plants growing on its 265 acres, the Arnold Arboretum is unusually well equipped to carry out such a breeding program.

It is particularly pleasing to acknowledge the hundreds of letters which have poured in from all over the country offering assistance or gifts of plants to replace those lost in the Arboretum during the hurricane of September twenty-first. These letters have come from private individuals, institutions, and many nurserymen who have generously offered plants of our own choice. The staff of the Arboretum appreciates the courtesy and interest shown by these people. The work of cleaning the wreckage in the Arboretum is progressing as rapidly as can be expected under the circumstances. There is a certain amount of routine fall work which cannot be neglected. Those areas in which the damage is the most conspicuous from the roads are being cleared as fast as possible. The tedious, time-consuming task of pruning broken branches from otherwise uninjured trees will probably not be started until late in the winter. However, much progress has already been made, and with some assistance from outside the hurricane area we hope to make a splendid showing by spring.

DONALD WYMAN







# HEDGE DEMONSTRATION PLOT

Arnold Arboretum

November, 1938

## Deciduous

<i>Acanthopanax Sieboldianus</i>	Fiveleaf Aralia
<i>Acer campestre</i>	Hedge Maple
“ <i>Ginnala</i>	Amur Maple
“ <i>platanoides</i>	Norway Maple
<i>Berberis mentorensis</i>	Mentor Barberry
“ <i>Thunbergii</i>	Japanese Barberry
“ “ <i>atropurpurea</i>	Red-leaved Japanese Barberry
“ “ <i>erecta</i>	Truedge Columnberry
“ “ <i>minor</i>	Box Barberry
“ <i>vulgaris</i>	European Barberry
“ “ <i>atropurpurea</i>	Purple Barberry
<i>Betula populifolia</i>	Gray Birch
<i>Caragana arborescens</i>	Siberian Pea-tree
“ <i>frutex</i>	Russian Pea-shrub
<i>Carpinus Betulus</i>	European Hornbeam
“ <i>caroliniana</i>	American Hornbeam
<i>Cercidiphyllum japonicum</i>	Katsura-tree
<i>Chaenomeles lagenaria</i>	Flowering Quince
<i>Clethra alnifolia</i>	Summersweet
<i>Cornus mas</i>	Cornelian-cherry
“ <i>racemosa</i>	Gray Dogwood
<i>Crataegus crus-galli</i>	Cockspur Thorn
“ <i>monogyna</i>	English Hawthorn
“ <i>phaenopyrum</i>	Washington Hawthorn
<i>Deutzia gracilis</i>	Slender Deutzia
<i>Elaeagnus angustifolia</i>	Russian-olive
“ <i>umbellata</i>	Autumn Elaeagnus
<i>Evonymus alata compacta</i>	Dwarf Winged Evonymus
<i>Fagus grandifolia</i>	American Beech
“ <i>sylvatica</i>	European Beech
<i>Forsythia intermedia</i>	Border Forsythia
<i>Ginkgo biloba fastigiata</i>	Upright Ginkgo
<i>Gleditsia triacanthos</i>	Common Honeylocust
<i>Hippophae rhamnoides</i>	Common Sea-buckthorn
<i>Hypericum densiflorum</i>	



Ligustrum amurense	Amur Privet
“ ibolium	Ibolium Privet
“ obtusifolium Regelianum	Regel Privet
“ ovalifolium	California Privet
“ vulgare	European Privet
Lonicera fragrantissima	Winter Honeysuckle
“ Korolkowii floribunda	Broad Blueleaf Honeysuckle
“ tatarica	Tatarian Honeysuckle
Maclura pomifera	Osage-orange
Philadelphus coronarius	Sweet Mockorange
“ “ pumilus	Dwarf Sweet Mockorange
Physocarpus opulifolius	Ninebark
Platanus acerifolia	London Planetree
Populus alba pyramidalis	Bolleana Poplar
“ nigra italica	Lombardy Poplar
Prinsepia sinensis	Cherry Prinsepia
“ uniflora	White Prinsepia
Prunus tomentosa	Nanking Cherry
Quercus imbricaria	Shingle Oak
“ palustris	Pin Oak
“ robur fastigiata	Pyramidal English Oak
Rhamnus cathartica	Common Buckthorn
“ Frangula	Glossy Buckthorn
Ribes alpinum	Mountain Currant
Rosa rugosa	Rugosa Rose
“ virginiana	Virginia Rose
Salix pentandra	Laurel Willow
“ purpurea	Purple Osier
Spiraea nipponica	Nippon Spirea
“ prunifolia	Bridalwreath
“ Thunbergii	Thunberg Spirea
“ Vanhouttei	Vanhoutte Spirea
Symphoricarpus albus laevigatus	Common Snowberry
Syringa chinensis	Chinese Lilac
“ Josikaea	Hungarian Lilac
“ vulgaris	Common Lilac
Tamarix pentandra	Fivestamen Tamarix
Tilia cordata	Littleleaf European Linden
Ulmus pumila	Dwarf Asiatic Elm
Viburnum dentatum	Arrowwood
“ Lantana	Wayfaring-tree
Viburnum Opulus nanum	Dwarf Cranberrybush
“ prunifolium	Blackhaw

## Evergreen

<i>Abies concolor</i>	White Fir
“ <i>Fraseri</i>	Fraser Fir
<i>Buxus microphylla koreana</i>	Korean Box
“ “ “ hybrid	
<i>Chamaecyparis pisifera filifera</i>	Thread Retinospora
“ “ <i>plumosa</i>	Plume Retinospora
“ “ <i>squarrosa</i>	Moss Retinospora
<i>Juniperus communis</i>	Common Juniper
“ <i>virginiana</i>	Redcedar
<i>Picea Abies</i>	Norway Spruce
“ <i>Omorika</i>	Serbian Spruce
“ <i>orientalis</i>	Oriental Spruce
“ <i>pungens glauca</i>	Blue Colorado Spruce
<i>Pinus Mugo</i>	Swiss Mountain Pine
“ “ <i>mughus</i>	Mugho Pine
“ <i>nigra</i>	Austrian Pine
“ <i>Strobus</i>	White Pine
“ <i>sylvestris</i>	Scotch Pine
<i>Pseudotsuga taxifolia</i>	Douglas-fir
<i>Taxus canadensis stricta</i>	Dwarf Hedge Yew
“ <i>cuspidata</i>	Japanese Yew
“ “ <i>capitata</i>	
“ “ <i>nana</i>	
“ <i>media</i> (hedge form)	
“ “ <i>Hicksii</i>	Hicks Yew
“ “ <i>Hatfieldii</i>	Hatfield Yew
<i>Thuja occidentalis</i>	American Arborvitae
“ “ <i>globosa</i>	American Globe Arborvitae
“ “ “Little Gem”	Little Gem Arborvitae
“ “ <i>robusta</i>	Ware's Arborvitae
“ “ <i>spiralis</i>	
“ “ <i>Wagneriana</i>	
“ “ <i>Woodwardii</i>	Woodward Arborvitae
“ <i>plicata</i>	Giant Arborvitae
<i>Tsuga canadensis</i>	Canada Hemlock
“ <i>caroliniana</i>	Carolina Hemlock



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